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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,753	11/19/2003	Daniel P. Baumberger	INT.P008	6178
45512	7590	10/09/2007	EXAMINER	
LAWRENCE CHO			PEYTON, TAMMARA R	
C/O PORTFOLIOIP				
P. O. BOX 52050			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402			2182	
			MAIL DATE	DELIVERY MODE
			10/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,753

Applicant(s)

BAUMBERGER ET AL.

Examiner

Tammara R. Peyton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 18-22, 26-30 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) is/are withdrawn from consideration.
- 5) ☐ Claim(s) is/are allowed.
- 6) ☒ Claim(s) 1-9, 18-22, 26-30 and 37-42 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. .
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u> </u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u> </u> | 6) <input type="checkbox"/> Other: <u> </u> |

DETAILED ACTION

Claim Rejections - 35 USC § 101.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention claimed in claim 30 is directed to non-statutory subject matter.

The recited method produces no tangible result. A virtual machine manager comprising a virtualization event dispatcher to virtualize an input output device by executing plurality of IO instructions from an instruction stream during a single virtualization event does not result in anything tangible wherein all of the elements would reasonably be interpreted by one of ordinary skill in light of the disclosure as software, such that the virtual machine manager, is a software instruction per se.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 18-22, 26-30, and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devine et al., (US 6,397,242) and Bugnion et al., (US 6,075,938).

As per claims 1, 3-9, 18, 20-22, 26-30, and 37-42, Devine teaches a method for performing virtualization, comprising; executing a plurality of input output instructions from an instruction stream during a single virtualization event and identifying an I/O instruction; and scanning the instruction stream to determine whether additional I/O instructions are present within an extent of instructions in the instruction stream. (Abstract, col. 5, Lines 12 - col. 6, Line 52, col. 10, Lines 51-59, col. 24, Lines 2-13. Figures 1-2, and 7- 8)

Devine teaches a virtualization system that employs a virtual machine monitor (VMM) on segmented-architecture computers. The VMM monitors a virtual machine (VM) emulating the computer architecture, and determine whether code executing on the VM may be executed in a direct execution environment (e.g., where the host processor may be set up with reduced privileges) or must be executed in a binary translation environment (e.g., when the virtual and underlying architectures mismatch). Devine specifically teaches of monitoring a single virtualization event. (Devine, col. 1, lines 53-64, col. 11, lines 34-48, 24, lines 18-26, col. 25, lines 7-21)

Devine does not specifically teach virtualizing an I/O device from an instruction stream, nonetheless, Bugnion teaches a virtualization system that employs VMM called Disco, which runs multiple independent virtual machines simultaneously on the same hardware by virtualizing all the resources of the machine. Each virtual machine is created with a specified set of I/O devices, such as disks and network interfaces and because with processors, most operating systems assume exclusive access to their I/O devices. The VMM Disco is required to virtualize each of these I/O devices and Disco must intercept all communication to and from the virtualize I/O devices to translate or emulate the operation. (Bugnion, col. 14, lines 30-col. 16)

It would have been obvious to one of ordinary skill at the time the invention was made that Devine would be motivated to implement the VMM Disco of Bugnion because virtualizing all the resources of the machine will export a more conventional hardware interface to the operating system thereby improving to the overall performance and efficiency of Devine's virtual machine.

As per claims 2 and 19, Bugnion teach instructions which when executed by the machine causes the machine to perform: identifying an IO instruction; and scanning the instruction stream to determine whether additional IO instructions are present within an extent of instructions in the instruction stream. (Bugnion, col. 9, lines 15-col 13, lines 1-13, col. 14, lines 30-col. 16)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammara Peyton whose telephone number is (571) 272-4157. The examiner can normally be reached between 6:30 - 4:00 from Monday to Thursday, (I am off every first Friday), and 6:30-3:00 every second Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a

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general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Mailed responses to this action should be sent to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231.

Faxes for Official/formal (After Final) communications or for informal or draft communications (please label "PROPOSED" or "DRAFT") sent to:

(571) 273-8300

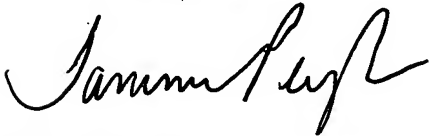
Hand-delivered responses should be brought to:

USTPO, Randolph Building, Customer Service Window

401 Dulany Street

Alexandria, VA 22314.

TAMMARA PEYTON
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Tammara Peyton', written in a cursive style.

Tammara Peyton

September 27, 2007